

## PATENT ABSTRACTS OF JAPAN

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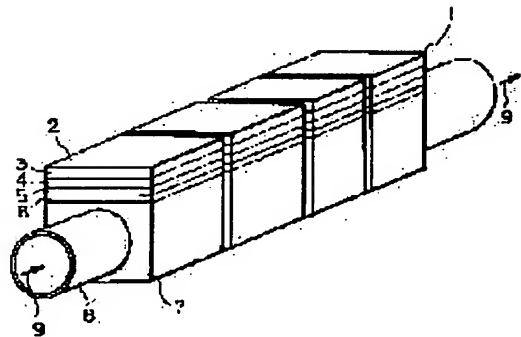
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## (54) FIRST WALL OF FUSION REACTOR

## (57)Abstract:

**PURPOSE:** To endure high heat load and make the improvement of erosionproof characteristic by forming a thin film between a metal material and a high melting point member and laminating to joint an intermediate layer wherein a ratio of components of them changes in steps.

**CONSTITUTION:** A surface 2 facing a first fusion wall 1 is formed of a high melting point metal of 3000°C or higher, for instance, a thin film 3 of tungsten. A next film 4 is jointed with the high melting point metal and a member material for cooling, for instance, another thin film composed of 80% tungsten and 20% copper. In the following, components are changed successively and a film 6 nearest to copper 7 used for a heat tank material 7 composed of a member material for cooling is jointed with a thin film composed of 40% tungsten and 60% copper. In addition, a pipe 8 penetrates the heat tank material 7 and cooling water is allowed to flow therein. The relation to a thermal expansion coefficient by the copper component in tungsten is linearly proportional. Accordingly, a ratio of the copper composition component is inclinedly changed to joint for the purpose of lessening generated thermal stress, having a high degree of expansion, fitting a joint face and making possible the joint of less defects.



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